



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,614	06/25/2003	Yukihiro Nakano	239459US0	2488
22850	7590	10/21/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			SHOSHO, CALLIE E	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/602,614

Applicant(s)

NAKANO ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-9 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 is/are allowed.
- 6) ☒ Claim(s) 7, 8 and 11-13 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/20/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. All outstanding rejections are overcome by applicants' amendment filed 7/25/05.

In light of the new grounds of rejection as set forth below, the following action is non-final.

**Claim Rejections - 35 USC § 102**

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 7-8 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato (U.S. 6,866,707).

Kato discloses water-based ink comprising aqueous medium and pigment-containing polymer particles that comprise pigment and water-insoluble polymer having ionic group at its end wherein the ionic group is derived from initiator having an ionic group, i.e. 4,4-azobis(4-cyanovalric acid) or 2,2-azobis(2-methyl propionamide)dihydrochloride. There is also disclosed method for making the pigment-containing polymer particles wherein the polymer is dissolved in organic solvent, followed by addition of pigment and water, kneading the resulting mixture, and

Art Unit: 1714

distilling off solvent (col.1, lines 6-11, col.5, lines 37-41, col.6, lines 30-47, col.9, lines 26-31, and col.27, lines 10-44).

In light of the above, it is clear that Kato anticipates the present claims.

4. Claims 7 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 1172421.

EP 1172421 discloses water-based ink comprising aqueous medium and water-insoluble polymer containing pigment wherein the water-insoluble polymer is obtained from monomer having salt-forming group, macromer, copolymerizable monomer, hydroxy group-containing monomer, and alkylene oxide group-containing monomer. It is noted that the water-insoluble polymer would intrinsically possess ionic group at the end of the polymer given that the polymer is obtained from anionic monomer. There is also disclosed method of making the polymer containing pigment wherein the polymer is dissolved in organic solvent, followed by adding pigment, water, and neutralizing agent, kneading the resulting mixture to form paste, and distilling off the solvent.

In light of the above, it is clear that EP 1172421 anticipates the present claims.

**Allowable Subject Matter**

5. Claims 1-5 are allowable over the "closest" prior art Bassett (U.S. 4,139,514) and Wang et al. (U.S. 2003/0092797) given that there is no disclosure in either reference of water-based ink comprising colorant and water-insoluble polymer having at least two hydroxyl groups at its end

wherein the colorant is contained in particles of the water-insoluble polymer as now required in present claim 1.

6. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 9 would be allowable if rewritten in independent form as described above given that there is no disclosure in the "closest" prior art of Cottrell et al. (U.S. 2003/0176533), Ma et al. (U.S. 5,272,201), EP 1158030, Kato et al. (U.S. 6,866,707), and EP 1172421 of water-base ink comprising aqueous dispersion of particles of pigment containing water-insoluble polymer having ionic group at its end wherein the ionic group is derived from chain transfer agent selected from the group consisting of thioglycollic acid, mercaptopropionic acid, and mercaptosuccinic acid as required in present claim 9.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

WO 01/30924 and EP 1059341, similar to EP 1177421, each disclose water-based ink comprising aqueous medium and water-insoluble polymer containing pigment wherein the water-insoluble polymer is obtained from monomer having salt-forming group, macromer, and copolymerizable monomer.

EP 1113051 discloses water-based ink comprising aqueous medium and graft polymer containing colorant wherein the graft polymer is obtained from acrylic polymer side chain and

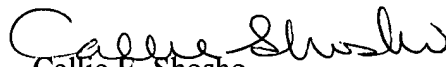
Art Unit: 1714

salt-forming group, however, there is no disclosure that the polymer has ionic group at its end as presently claimed.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Callie E. Shosho  
Primary Examiner  
Art Unit 1714

CS  
10/15/05